REMARKS

With this Response, no claims are amended, added, or cancelled. Therefore, claims 1-25 are pending.

Brief Summary

Because wireless communication resources, e.g., bandwidth, are limited, they need to be managed to maximize their usefulness. In a system that services multiple wireless remote stations, various communication channels may be defined between a wireless remote station and, for example, a base station. In order for a remote station to communicate with the base station over the communication channel, the system may be operated such that a session must be established on a communication channel, which gives the remote station authorization to communicate over the communication channel. The sessions may be finite in duration and so need to be managed to determine when a session should terminate or be renewed.

A communication **session** refers to a concept associated with the protocol layers of a communication system, where a remote station registers with, for example, a base station to have a right to access certain communication channels for a certain duration. Of course, not all systems define sessions to enable communication. Some systems operate on dedicated channels and others operate with permanent or open access channels, for example. In a system that uses the concept of sessions, a communication session may not have an associated time limit, requiring instead that a termination signal be exchanged to terminate the session. A communication session, however, may also be defined to have an associated time limit, and a lapse of the time limit may be defined to terminate the session. Termination of a session terminates the right of the remote station to communicate over the communication channel. Tear-down of the link on the channel will follow. A termination of the session **requires the**

remote station to re-register to re-establish the right to access the communication channel before the remote station can communicate on the channel. The communication channels are typically defined in the communication protocol employed by the communication system. Thus, a session is an upper protocol layer concept as compared to the physical layers that handle the electrical characteristics of signal transmission.

Communication systems also use of the concept of a packet when discussing signal transmission. A packet is a sequence of data bits grouped together to be transmitted over a communication channel. The timing and format of a packet is handled at the physical layer level of a transmitter. The physical layers are concerned with the transmission of packets, and no with whether the system operates over dedicated channels, open access channels, or whether a session must be established to communication over a channel. Packets may be transmitted over a communication channel as long as a session remains open, meaning the transmitter has a right to access the channel. In many systems, packet transmission includes error correction. When a packet error is detected, retransmission of the affected packet(s) is requested. One such error detection mechanism is packet timeout. If transmission of a packet within a certain time fails to occur, an error is generated, and retransmission of the packet is requested. However, the packet timeout will simply cause a packet error detection to occur, and will not terminate the session. When a packet fails for timeout, the transmitter is not required to re-register for a new session to be able to access the communication channel over which the packet is to be sent. In a system that uses the concept of communication sessions, packet transmission and retransmission will occur all while the session is open, even if retransmission is caused by a packet timeout.

Claim Rejections - 35 U.S.C. § 102

Claims 1-18 and 22-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,587,985 issued to Fukushima et al. (*Fukushima*). Applicants respectfully submit that these claims are not anticipated by the reference for at least the following reasons.

Rejection of Claims 1-7

Claim 1 recites the following:

> a communication device **establishing a wireless communication session** with a remote user terminal, the wireless **communication session having associated therewith a session time limit;**
> the communication device **detecting a session renewal;** and
> the communication device altering the session time limit in response to detecting the session renewal.

The Office Action at page 2 asserts that *Fukushima* discloses the invention. Particularly, the Office Action cites col. 15, lines 4 to 8 as disclosing establishing a wireless communication session. That section of *Fukushima* recites in full:

> Each packet transmitted from the transmitting end is composed of a data section containing digital data such as video data, audio data, and text data, and a header section containing additional information other than these digital data.

Applicants note that transmission of a packet does not disclose expressly, nor does it inherently suggest the use of a communication session, nor the establishing of such a communication session. Furthermore, *Fukushima* discusses only a "transmission unit," and fails to disclose expressly or inherently that the transmission unit will perform "wireless" communication as claimed. The MPEP requires that "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131. Applicants do not understand what the composition of data packets in the cited reference has to do with the use of a wireless communication session and the establishing of the wireless communication session. Therefore, Applicants respectfully request

clarification on what in the cited reference is purported to disclose establishing a wireless communication session as claimed in order to provide a response to the Office's rejection on this basis.

The Office Action cites col. 14, lines 45 to 50 and 63 to 67 as disclosing a session time limit associated with a communication session. That section of the cited reference recites in full:

> In the data transmission method of this first embodiment, **data transmission** from the transmitting end to the received end is continuously **performed in units of packets**, each packet having additional information relating to its sequence number, priority, and data reproduction time at the receiving end, while successively reproducing data of packets received at the receiving end. (Emphasis added.)

As Applicants understand, this section of the reference discusses transmission of a packet, and the composition of the packet is described. Applicants are not able to understand from the Office Action how transmission of a data packet is purported to disclose a session time limit, and respectfully request clarification on this point to enable Applicants to provide a response.

The Office Action cites *Fukushima* at col. 15, lines 12-28 as disclosing altering the session time limit. In a telephone conversation with the Examiner on January 19, 2004, the Examiner also discussed lines 29-38 in relation to this limitation of the claims. These sections of *Fukushima* recite in full:

> Further, the data transmission apparatus 101 includes a buffer 17 for retransmission (hereinafter, referred to as a retransmission buffer 17), a packet priority decision unit 15, and a retransmission buffer management unit 18. The retransmission buffer 17 stores predetermined packets amongst the received packets, as retransmission packets. The packet priority decision unit 15 **decides the priorities** of the received packets. The retransmission buffer management unit 18 controls the retransmission buffer 17 such that data of packets the priorities of which are equal to or higher than a predetermined value are stored in the buffer 17, in accordance with the decided priorities of the packets. To be specific, **only when data of a packet having a sequence number indicated by a retransmission request from the receiving side is stored in the retransmission buffer 17, the retransmission decision unit 16 decides that data of this packet should be retransmitted to the receiving end.**

> Further, the data transmission apparatus 101 includes a retransmission instruction receiving unit 14 and a retransmission decision unit 16. The retransmission instruction receiving unit 14 **receives a retransmission instruction** (hereinafter also referred to as a retransmission request) from the terminal at the receiving end. The retransmission decision unit 16 decides whether retransmission of a packet for which the retransmission instruction has been made is performed or not. (Emphasis added.)

As Applicants understand it, this section of the reference discusses sending of retransmission instructions, and retransmission of packets, but only for packets of sufficiently high priority. Applicants are unable to understand from the reference or the Office Action how the retransmission of packets based on priority level of the packets is purported to disclose altering a session time limit. As discussed above, retransmission of packets, even if for purposes of timeout, which is not disclosed or suggested in the reference, is unrelated to a wireless communication session, as recited in Applicants' claims. Applicants respectfully request clarification on what exactly in the cited reference is purported to disclose altering a communication session time limit to enable Applicants to provide a response to this rejection of the claims.

Claims 8-14

Claim 8 recites the following:

> a communication device **providing a session to a remote user terminal, the session having associated therewith a first session time limit;**
> the communication device determining whether a **session renewal** has been generated; and
> upon lapse of the first session time limit, the communication device, if having **determined that a session renewal has been generated, renewing the session** for a second session time limit, and if having determined that a session renewal has not been generated, terminating the session.

The Office Action at page 4 cites *Fukushima* at col. 5, lines 47-59 as disclosing providing a session having associated therewith a first session time limit. That section in full recites:

> a retransmission decision unit for deciding whether retransmission of the packet for which the retransmission request has been made should be performed or not, on the basis of the retransmission request and the storage status of the retransmission packets in the retransmission packet storage unit; a transmission queue management unit for setting the transmission order of the received packets and the packets which have been decided as packets to be retransmitted, on the basis of the additional information; and a transmission unit for transmitting, in the transmission order set by the management unit, the data of packets other than the packets which are decided as packets that cannot be in time for reproduction at the receiving end, by the reproduction time decision unit. Therefore, the transmission. quality in a radio section in real-time transmission is improved and, further, the number of retransmission times is reduced.

As Applicants understand the reference, it discusses the packet order and timing of retransmission of packets. Applicants are unable to understand how this discussion of retransmission of packet is purported to disclose a session having associated therewith a session time limit, as claimed. Applicants therefore respectfully request further clarification in order to respond to this rejection.

The Office Action further cites col. 17, lines 31-36 as disclosing lapse of the first session time limit. This section recites in full:

> data transmission from the transmitting end to the receiving end is continuously performed in units of **packets each having additional information** relating to its sequence number, priority, and data reproduction time and, simultaneously, data of the packets received at the receiving end are successively reproduced. (Emphasis added.)

This section is nearly identical to the one mentioned above discussing transmission of data packets and the composition of the data packets. Applicants are unable to understand from the reference or the Office Action how transmission of data packets is purported to disclose or suggest lapse of a session time limit. Applicants therefore respectfully request clarification on this point in order to be able to respond to this rejection.

The Office Action further cites col. 19, lines 1-6 and col. 20, lines 33-41 as disclosing determining whether a session renewal has been generated, and if so, renewing the session for a second session time limit. These section recite in full:

> On the other hand, **when an error occurs during transmission** of a low priority packet (S3) of sequence number S3 and only a high priority packet (S4) of sequence number S4 which follows the packet S3 is normally received, no retransmission request for the low priority packet S3 is made when the next high priority packet (S4) is received....
>
> Further, in the data receiving apparatus (receiving end) 203, in addition to the receiving operation of the data receiving apparatus 201 of the first embodiment, the following retransmission is performed. That is, when the sequence number embedded in the received packet is extracted, **if the packet corresponding to this sequence number is an error packet, a packet retransmission request is sent to the transmitting end by using the sequence number of this packet.**

These sections of *Fukushima* merely discuss variations on the same things discussed previously; that is, they merely discuss retransmission of packets when errors occur, and the retransmission and order of retransmission is dependent on packet priority. Applicants are again unable to understand how retransmission of packets based on priority level is purported to disclose or suggest a session renewal and renewing for a second session time limit. Applicants respectfully request clarification of this point in order to be able to respond to this rejection.

Claims 15-18 and 22-25

Regarding these claims, claim 15 recites the following:

> a session lifespan means for **providing a time limit to a communication session** with an external device, the communication session characterized by an ability of the external device to have access to wireless communication channels for exchanging data; and
> a session management means for **altering the time limit in response to a predetermined condition.**

The rejections in the Office Action are similar for these claims as for claims discussed above. In short, the Office Action is again citing sections of *Fukushima* related to retransmission of data

packets based on data packet priority. Applicants are unable to understand how retransmission of packets is purported to disclose or suggest the session time limit, or altering the session time limit, as claimed. In order to respond to the rejection, Applicants respectfully request clarification of what in the cited reference is purported to disclose the invention, and how it is purported to do so.

Claim Rejections - 35 U.S.C. § 103

Claims 19-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fukushima* in view of U.S. Patent No. 6,374,112 B1 issued to Widegren et al. (*Widegren*). The rejection of these claims under 35 U.S.C. § 103(a) is based upon a rejection under *Fukushima*, similar to that discussed above. The section of *Fukushima* cited (col. 21, line 60 to col. 22, line 31), while different than the sections presented above, is similar in content. Similar to that discussed above, Applicants are unable to understand how retransmission of data packets according to priority is purported to disclose or suggest a session time limit. *Widegren* fails to clarify the rejection under *Fukushima*, or provide support itself for rejecting the claims. Therefore, Applicants respectfully request clarification of these rejections.

Conclusion

Applicants are unable to understand how the cited reference is purported to disclose or suggest the invention as recited in the claims. To the extent that Applicants have understood the rejections and the cited reference, the Office Action has failed to establish that the claim limitations are disclosed in the cited reference. According to MPEP 2131, a proper anticipation rejection requires that the cited reference disclose all claim limitations; therefore, Applicants respectfully submit that rejection of the claims under *Fukushima* is improper.

The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

Date: 1/21/04

Gregory D. Caldwell
Reg. No. 39,926

12400 Wilshire Blvd., 7th Floor
Los Angeles, CA 90025-1026
Telephone: (503) 684-6200

GDC/VHA

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office at:

1-703-746-5961
Facsimile Number

Signature 1/21/2004 *Date*